

Technologies Being Tested

Optical open-path monitors. A fifth company—Spectrex, Cedar Grove, NJ—completed this test for two of its instruments in October at Battelle's research site near West Jefferson, OH. The verification reports are being reviewed. Contact: Jeff Myers, 614-424-7705 or myersjd@battelle.org.

Ambient fine particulate monitors. The second phase of this test started in mid-December and was completed in January at an EPA SuperSite in Fresno, CA. Seven vendors with 13 monitors participated in Phase 2 and in the first phase, which was conducted last summer at the U.S. Department of Energy's National Energy Technology Laboratory in Pittsburgh, PA. Draft reports are being prepared and final reports are expected to be available by this summer. Contact Ken Cowen, 614-424-5547 or cowenk@battelle.org.

Turbidimeters. A fourth company—ABB, Lombard, IL—is to have an instrument tested in April at a municipal water plant in Columbus. Contact: Ken Cowen (see above).

Multi-parameter water probes. Representatives of seven companies attended a vendor meeting in January at Battelle's facilities in Columbus, OH, to provide input to the verification test/QA plan. The draft plan will be sent to interested vendors for review and comment. Contact: Jeff Myers (see above).

Mercury CEMs. Four instruments, submitted by three vendors, were

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The array of bottles was used to collect water samples from Massachusetts Bay as part of the verification test of the Nitrate Elimination Co., Inc's portable field nitrate test kit (inset).



Stakeholders to Focus on Technologies

Monitoring technologies—those being tested, yet to be scheduled, and still needed—will be at the top of the agendas for members of the air and water stakeholder committees at meetings scheduled this month by the AMS Center, one of six centers in EPA's Environmental Technology Verification program. The air stakeholder committee will meet March 19-20 in Santa Fe, NM, and the water stakeholder committee will meet March 26-27 in Pacific Grove, CA.

The AMS Center's stakeholder committee meetings, which are held twice a year, are rotated around the country so regional specialists can describe their monitoring challenges and needs. The speakers may be state or local regulators, permittees, technology vendors or developers—including some stakeholder committee members—who present information, suggestions, and insights from their varied perspectives. In return, the visiting speakers learn more about upcoming regulatory changes, new technologies, the objectives of the ETV program, and technologies being tested by the AMS Center. Test coordinators from the AMS Center will give status reports on the technologies being tested and those considered priorities for future testing (see lists at left).

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The AMS Center is part of the U.S. Environmental Protection Agency's Environmental Technology Verification Program. ETV was established to accelerate the development and commercialization of improved environmental technologies through third-party verification testing and reporting of the technologies' performance. The ETV process provides purchasers and permittees with an independent assessment of the technology they are buying or permitting and facilitates multi-state acceptance. For further information, contact Helen Latham at Battelle, 505 King Ave., Columbus, Ohio 43201-2693; Phone 614-424-4062; Fax 614-424-5601; E-mail lathamh@battelle.org.

Upcoming Events

March 2001

- 19-20** AMS Center's air stakeholder committee meeting, Santa Fe, NM
- 25-30** Stationary Source Sampling and Analysis Conference, Destin, FL, organized by the United Engineering Foundation, Inc. Roy Owens, from Owens Corning, a member of the AMS Center's air stakeholder committee, will chair a session at which Karen Riggs of Battelle will be presenting a paper about the ETV program and the AMS Center.
- 26-27** AMS Center's water stakeholder committee meeting, Pacific Grove, CA

May 2001

- 8-10** EnviroExpo, World Trade Center, Boston, MA. The ETV program will have a booth.

June 2001

- 17-21** AWWA 2001, Grand Hyatt Washington, Washington, DC. The ETV program will have a booth.
- 24-28** A&WMA 94th Annual Conference & Exhibition, Orange County Convention Center, Orlando, FL. The ETV program will have a booth. Jeff Myers of Battelle and vendors who participated in the AMS Center's verification test of optical open-path air monitors will discuss their experiences in a session titled "Validation of Optical Sensors."

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tested in the first phase of the verification test of commercially available continuous emission monitors (CEMs) for mercury. The test was conducted in January at the Rotary Kiln Incinerator Simulator (RKIS), a pilot-scale combustion facility at the Environmental Research Center, a part of EPA's National Risk Management Research Laboratory (NRMRL) at Research Triangle Park, NC. Battelle will conduct Phase 2 of the verification test later this year at a full-scale facility, such as an operating incinerator or coal-fired power plant. Contact: Tom Kelly, 614-424-3495 or kellyt@battelle.org.

On-board vehicle emission monitors.

The verification test of an on-board emission monitor in gasoline-powered vehicles will be held beginning April 23 at the Automotive Testing Laboratories in E. Liberty, OH. The vendor is Clean Air Technologies of Buffalo, NY. The test schedule is currently being planned. Contact Tom Kelly (see above).

Portable water quality analyzers. This technology is used to determine various contaminants in water. A verification test was conducted for the Nitrate Elimination Co., Inc.'s (NECI) portable field nitrate test kit (model F-NTK-01) in January and February at seven locations. The draft verification report is being sent this month to reviewers for comment and the final verification report and verification statement are expected to be approved by EPA/ETV in May. Contact Adam Abbg, 614-424-5484 or abbgya@battelle.org.

High Priority Technologies

The AMS Center has given high priority to identifying technologies for verification in the following air and water areas, with advice from its two stakeholder committees and input from federal, state, and local regulators and permittees.

Air

- Instruments to monitor organic speciation of vapors in stacks (e.g., dioxins, benzene, phenol, and chlorinated hydrocarbons)
- Leak detectors ("sniffers") for fugitive emissions from valves and flanges
- On-board vehicle emission monitors
- Portable electrochemical SO₂ analyzers
- Continuous emission monitors (CEMs) for ammonia "slip." (Ammonia is a reagent that, when added in a selective catalytic reactor, can reduce NO_x emissions to nitrogen and water, which are innocuous. During this process, some ammonia may remain in the gas stream—this is called "ammonia slip." The CEMs are used to detect the leftover ammonia before it is released to the atmosphere.)

Water

- Portable water analyzers or test kits to monitor for arsenic in drinking water (to be discussed at the water stakeholder committee meeting in March)
- Field-deployable multi-parameter water quality probes
- Rapid detectors of biological contaminants, such as cryptosporidian, E.coli, giardia
- Microbiological methods and sensors that detect chemical contaminants.

Stakeholders *(from page 1)*

At the air stakeholder committee meeting, Fabian Macias of the New Mexico Air Quality Bureau will describe the state's air monitoring needs. EPA's Jeffrey Ryan will talk about the agency's research direction on mercury continuous emission monitors (CEMs), control technologies, and his experiences from hosting a verification test.

At the water stakeholder committee meeting, Karen Worcestor of the Central Coast Regional Water Quality Control Board will present information about monitoring challenges facing California's central coast. Dane Hardin of Applied Marine Sciences will discuss advanced technologies to monitor industrial and municipal discharges in the Monterey Bay area.

EPA/ETV representatives Penny Hansen and Sarah Bauer will provide updates about the program's accomplishments and future plans. Several members of the stakeholder committees are also on the agendas.

Speakers and topics include Tim Hanley and Tom Logan of EPA, current and expected air regulations; Will Ollison of API, personal exposure and indoor air monitors; John Carlton, Alabama Department of Environmental Management, and Christine Kolbe, Texas Natural Resource Conservation Commission, the vendor meeting for multi-parameter water probes; Jen Clancy, Clancy Environmental, methods for monitoring pathogens in water; and Rainer Hoenicke, San Francisco Estuary Institute, monitoring pollutant loadings in San Francisco Bay, including episodic toxic events and suspended sediments.

Heavy Hitters

The ETV web site (<http://www.epa.gov/etv>) recorded almost 42,000 "hits" in February, nearly 6,000 of which were from information searchers outside the United States. The AMS Center's direct address is http://www.epa.gov/etv/07/07_main.htm.